INSURANCE – GENERAL

Nat CAT: The worst is yet to come

L-R: Ms Christine Ziehmann, Ms Sharon Ooi, Mr Jan Mumenthaler, Mr Hemant Nagpal and Mr Shitalkumar Khandar.

With climate change bringing unprecedented Nat CAT intensity, the recent 16th Conference on Catastrophe Insurance in Asia organised by *Asia Insurance Review* was a stark reminder that the (re)insurance industry needs to stay vigilant and improve its offerings to combat Nat CAT risks. We bring you the highlights.

By Chia Wan Fen

"Preparing for the worst we have seen is not the same as preparing for the worst," this message, emphasised by AIG global construction Asia Pacific and catastrophe manager Shitalkumar Khandar at the conference, was a key takeaway. It highlighted the need for the industry to brace itself for extreme weather as a 'new norm', with the strongest tropical cyclones and major flood events in the past few years, a precursor of things to come, noted RMS vice president Christine Ziehmann.

"How much of it is due to climate change, and how much of it is natural climate variability is hard to say for sure, but there is certainly a component driven by humans. Thus the insurance industry needs tools and models to be able to anticipate these extreme events to be able to manage their businesses and offer products to protect businesses and the community," she said.

Promising opportunities to bridge Asia's protection gap

Despite the still significant Nat CAT protection gap in Asia, with 84% or $26bn out of the $31bn economic losses in 2017 in Asia due to catastrophe uninsured, there are some promising signs that this gap can be bridged, observed keynote speaker Swiss Re Asia head of P&C underwriting Sharon Ooi.

First, regulatory liberalisation in emerging Asia has allowed for increased participation, both local and foreign, in the insurance market. Second, there exists stronger support for data-sharing in several countries, allowing for innovation and public-private partnerships (PPP), like legislation to make government data available for modelling in China. Third, there have been increased regional collaborative efforts in Nat CAT to facilitate higher insurance penetration, like the establishment of the Southeast Asia Disaster Risk Insurance Facility (SEADRIF) parametric disaster insurance pool backed and funded by Japan.

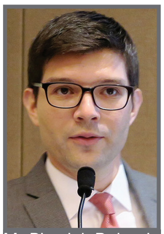
> **Preparing for the worst we have seen is not the same as preparing for the worst.**

Finally, leveraging new technologies has been an enabler for greater efficiency and convenience in terms of distribution, underwriting, policy servicing and claims. However, Ms Ooi noted that the industry cannot act alone in bridging the protection gap, but must canvass multiple stakeholders including governments in partnerships. The focus should be on the underinsured and uninsured, and the ability to scale and innovate is key to provide protection.

Underinsured and uninsured in emerging markets

Speakers also looked at PPP solutions for the under/uninsured communities. International Finance Corporation Insurance Services Group principal insurance officer Jan Mumenthaler said it is crucial for countries to have a strategy for financial protection against disasters, which needs to encompass both sources of financing and mechanisms for effective disbursement of financing in-country. This will enable prompt emergency funding and reconstruction and development funding. While the private sector could provide risk capital and technical expertise, intergovernmental entities like the World Bank's IFC play a role in setting up risk indices, index-based insurance products and support local training in building code compliance.

Meanwhile, the InsuResilience Investment Fund combines public and private sector investments with technical assistance from its partners, to create a market for climate insurance, as well as to offer attractive returns for its investors. It aims to increase climate insurance coverage drastically by up to 400m of the poor and vulnerable by 2020, shared BlueOrchard Investments head of APAC business development Pierrick Balmain.



Mr Pierrick Balmain

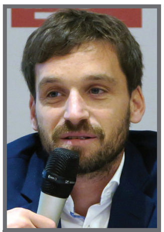
Disaster microinsurance, which is insurance that is inclusive, affordable and accessible, is also part of the solution for the poor and has seen considerable success in areas like the Pacific islands. It is however, not the way forward in managing Nat CAT and "not for every insurer", said UN Capital Development Fund regional inclusive insurance specialist Michael Carr, as there are "too many barriers" such as the lack of incentives and subsidies for microinsurance development, and it remains a struggle to design cost effective business models to insure assets like crops and livestock. However, governments and some major (re)insurance companies do have microinsurance ventures, and it is still valuable as part of a broader disaster risk management, transfer and financing solutions involving PPP.

Mr Michael Carr

Modelling and improvements in Nat CAT protection

The availability of models and ongoing enhancements and innovation in solutions is an important aspect in insuring against Nat CAT and was extensively discussed. RMS model product management director Hemant Nagpal spoke of his organisation's efforts to ensure the robustness of its models in the region. For example in Japan, RMS most recently released a high-definition Japan earthquake and tsunami model, incorporating key research advancements on recent earthquakes to have hit the country. It has also incorporated a fully probabilistic tsunami model, thus providing a comprehensive view of earthquake risk for Japan.

Big data and machine learning has also enhanced the case for global, connected and predictive compared to just static risk modelling, as reask. earth co-founder Dr Thomas Loridan explained. Now that the world has some 50 years of quality climate data and computing resources have improved, the AI-driven start-up is taking a long term average risk view of climate predictors to predict trends, push the ways modelling explores uncertainty and look at dynamic risk pricing based on latest climate data. These developments in time create new questions though – should a (re) insurer's underwriting philosophy change if it knew how an upcoming winter would be?



Dr Thomas Loridan

Speakers also covered the limitations of modelling and the need to recognise the use of assumptions in models. JLT Re APAC head of catastrophe modelling Dr Apoorv Dabral noted that it was important to be aware of the uncertainties of modelling, the differences in results which variations of models may provide, and techniques like blending of different models to reduce

Dr Apoorv Dabral

uncertainties. Aon Benfield associate director Himavant Mulugu noted however, that model usage is only going to increase, but "a model cannot replace an underwriter" and insurers must keep pace with location analytics to stay relevant. "Models are the imperfect substitute where the perfect solution is not possible," said Dr Dabral.


Mr Himavant Mulugu

AIR Worldwide Southeast Asia and ANZ vice president and managing director Ashish Jain acknowledged that the use of CAT modelling has evolved beyond portfolio pricing to a whole range of applications from risk selection to portfolio optimisation and that major strides have been made with specific models for tsunamis, wildfires and storm surges. In addition to Nat CAT, there are now also models for cyber, terrorism, supply chain risks and life and health. The new challenges for modelling are that these new risks are not geographically bound; in addition, the greater risk of today's global interconnectivity of all these risks needs to be addressed.


Mr Ashish Jain

Parametric solutions

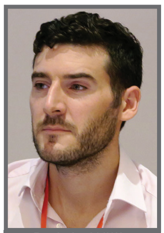
Speakers also discussed the value in parametric solutions and the advantages they bring compared to indemnity-based ones. These include speed and certainty in pay-outs and coverage of risks not otherwise easily insurable. Mr Jain noted that there is currently "a lot of appetite" in the market to consume and invest in parametric solutions and parametric CAT bonds as seen from a very active 2017 in this space.

Willis Towers Watson Asia alternative risk transfer solutions managing director Richard Zhang pointed out that basis risk – the gap between amount received and loss suffered – one of the main problems with parametric solutions, can be managed through careful and accurate modelling. He highlighted that there have been successful 'hybrid' schemes, with a parametric element for speed, coupled with an indemnity element. Improvements in research and modelling over the years can also help the upgrade to more technical triggers.


Mr Richard Zhang

Improvements in data availability

The conference also featured sessions on floods, the most common yet most underinsured risk in Asian emerging markets. The industry is improving its capabilities of pricing flood risk. While collection of flood exposure data can still be improved, there are now datasets collected from across the globe and high-resolution flood maps for various geographies, said JBA Risk Management managing director Dr Iain Willis. Beyond bridging the protection gap, these flood maps can be sorted by damage ratio or hydro accumulation, to help a company diversify its portfolio from a hydrologically sensible perspective; or event datasets based on past flash floods or river floods.


Dr Iain Willis

Making climate change a boardroom issue

Having seen the rising threat of Nat CAT and how climate change can intensify its effects, insurers can and should do more to make managing climate change a board room issue. AIG's Mr Khandar said that to engage their boards further, insurers need to articulate the threat of climate change and align it with the long-term success of the business. They need to illustrate the scope of the issue in terms of possible events and durations and how that may impact on business strategy, and also emphasise the need to uphold best market practices as part of a socially responsible and ethical organisation.

The 16th conference on catastrophe insurance in Asia was sponsored by RMS and supported by the International Insurance Society, Taiwan Typhoon and Flood Research Institute and ACTS.

More exclusive coverage of the conference is available on AIR+ at *Asia Insurance Review*'s website.